

### REMARKS

The examiner initially rejected claims 1-3, 16, 17 and 23 over Henze (US#4,917,597) in view of Pappas (US#5,842,850). The remaining claims are all dependent, and were rejected over other art of record. Applicant has amended claim 1, added independent claim 24, in Jepson format, and cancelled claim 2. Because applicant believes independent claims 1, 23 and 24 are now allowable for the reasons explained below, applicant does not separately argue the limitations of the dependent claims as separate bases for patentability.

Applicant will first list the important differences between the prior art and the invention as claimed, second, summarize the invention and third, point out why these difference are important and unobvious.

The most important structural differences between applicant's candle improvement and the prior art are the following structural features and their combination:

1. applicant's improvements are applicable to freestanding candles which are at least 2 inches wide (although such candles are in the prior art, applicant's improvements are applicable only to such candles);
2. applicant has a flame resistant sheet joined or bonded to the fuel body and extending at least 1 inch from the axis of the wick; and
3. applicant's wick support is attached to the flame resistant sheet.

These features cooperate to improve the safety of a freestanding candle in the following manner.

Applicant's invention is only applicable to a freestanding candle because it is not needed in a container candle, or a candle which is burned in a candleholder. A freestanding candle (defined at page 2, line 16 of the specification) is a candle that is capable of standing upright on its own and, therefore, does not require a container or a candleholder to support it. A pillar candle is a typical freestanding candle and applicant's invention overcomes hazards which are inherent in freestanding candles but are not present in candles supported in a container or a candleholder.

The hazards arise because consumers sometimes place a freestanding candle on a surface, such as a wooden table, which is flammable. This occurs despite the fact that freestanding candles should be placed in a metal tray or dish. When consumers make this mistake, applicant's invention reduces the resulting fire hazards.

These hazards are described more fully in paragraphs [0002] - [0013], but are summarized here. A burning candle has a candle floor, defined in paragraph [0005]. The candle floor is the solid wax portion of the candle which extends upwardly from the bottom surface of the candle to the bottom of the pool of liquid wax which forms at the top of a burning candle around the wick. As the candle burns, this wax floor becomes thinner. One hazard occurs if the candle burns down so that only a relatively thin wax floor separates the candle flame from an underlying flammable surface. Since a burning candle has a pool of liquid wax around the wick, it is possible for the wax floor to eventually melt through and permit the liquid wax to run onto the support table. Applicant's "flame-resistant sheet joined to the fuel body" (claim 1) prevents such leakage. The sheet is joined to the bottom surface of the fuel body (see paragraph

[0050]). The most important reason for joining the flame resistant sheet to the bottom surface of the fuel body is so that the sheet can form a sealed barrier that prevents the melted liquid wax from running out onto the supporting table if it melts through the bottom of the candle. If the flame resistant sheet were not joined to the fuel body, the flame resistant sheet could separate from the bottom of the fuel body and permit leakage through the resulting gap. Another reason for joining the flame resistant sheet to the fuel body is so that the flame resistant sheet remains with the candle wherever the consumer places the candle. If the flame resistant sheet was not joined to the fuel body, the consumer might discard it.

The examiner is asked to note that applicant is not claiming merely the flame resistant sheet being bonded to the wick support (sustainer). That is useful but does not provide the barrier to the liquid wax described above that prevents the liquid wax from running out onto a supporting table..

Another hazard is that, when the candle burns down so that the wax floor is thin, the wick holder can fall over causing the wick and the flame it supports to move away from the center of the candle and closer to an edge. The off-center flame can cause the side walls of the burning candle, which ordinarily retain the pool of liquid wax, to melt through and allow the wax to spill over the side of the candle onto the supporting table. Such a spill is even a worse hazard than the flow of liquid wax onto a table because such a spillover of liquid wax can also carry floating particles, such as carbon balls, out onto the table with the liquid wax. These floating particles can act as secondary wicks and allow flames to spread out onto the wax overflow. Applicant reduces this hazard by

attaching the wick support to applicants flame resistant sheet so that the wick support will not fall over and create this hazard.

These hazards are not identified or described in the prior art and the prior art suggests no means to combat them, aside from urging consumers to set a freestanding candle on a tray or dish, which doesn't help if the consumer does not do it. The above listed structural features of applicant's invention cooperate to greatly reduce the described hazards, even when the consumer ignores the recommend placement of a freestanding candle on a tray. These features which make up applicant's invention are not needed with a container candle or when a candle holder is used because both candle containers and candle holders are essentially containers which prevent the hazards in the same way they would be prevented if consumers always used trays or dishes for freestanding candles.

The Henze reference does not teach any of this. The Henze candle: (1) is not a freestanding candle; (2) does not have its flame resistant sheet joined to the fuel body; (3) does not have its wick support attached to the flame resistant sheet; and (4) has no liquid fuel flow barrier preventing flow up the wick.

Looking at these features individually, the Henze candle is a container candle, not a freestanding candle. Henze makes it clear that he is substituting a wax jacket for a plastic jacket (Henze col. 1, lines 21-46). A jacket is just a candle container by another name. The fact that Henze's jacket is a container and not a part of the candle fuel body is made clear in Henze (col. 2, lines 44-48) by his statement that he selects the melting point of his wax jacket so that "the jacket does not burn as the candle burns". Henze specifically says (column 2, lines 27-29) that "the wax insert is combustible and burns

down to the bottom during use. The remaining jacket is collected, comminuted and remelted." Therefore, it is clear that Henze's wax insert 2 is the candle fuel body, is the only part through which the wick extends and is the only part that burns. Henze's jacket 5 is constructed and operates as a container. Consequently, Henze's wax jacket, like other candle containers, does not have the hazards which applicant's invention reduces. Since Henze is a container candle, he teaches nothing about a freestanding candle or reducing its hazards.

Additionally, Henze's insulator or insulating layer 6 is not attached to the Henze candle body (insert 2) as is made clear from Henze's description. Henze refers to the insulating layer (column 2, line 3) as being "in the jacket". He also says (column 2, line 10) that "The heat insulator can be recovered after melting the jacket and reused". Thus, Henze's insulator must be in the jacket because it is recovered by melting the jacket. Therefore, Henze's insulating layer 6 is attached to the jacket container not to his inserted candle fuel body.

Nowhere in Henze can applicant's undersigned attorney find any indication that his wick support is attached to his insulating layer 6. The examiner seems to have recognized this fact. However, the examiner says that Pappas shows a wick support sealingly bonded to its "support layer". Indeed, the examiner's observation is correct in the broad sense that Pappas shows a wick support sealingly bonded to the interior bottom of a container. But applicant does not claim bonding to a generic "support layer" but rather includes in his claim bonding to the flame resistant sheet which is also joined to the fuel body. The term "flame resistant sheet" is considerably narrower and different from a

“support layer”. Applicant's flame resistant sheet and the bottom of a candle container are two entirely different structures and applicant's claims refer to a flame resistant sheet. Bonding a wick support to the interior bottom of a candle container does not teach a way to reduce the hazards which applicant's invention addresses and would not provide the operation of applicant's structure.

MPEP 706.02(j) says:

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure.

Here, none of the prior art recognizes or tries to solve the problems which applicant's invention solves and none of the prior art teaches the structures and their combination in the manner described above and in applicant's claims in order to solve those problems. The purpose of the Henze candle structure is entirely different from applicant's invention. Henze does have a candle, a wick, a wick holder and an insulating sheet but they are not structurally combined and related as in applicant's claim 1. Specifically, Henze does not have a flame resistant sheet joined to the fuel body, does not have its wick support attached to a flame resistant sheet; has no liquid fuel flow barrier preventing flow up the wick and isn't a freestanding candle. Because it lacks these features, it offers nothing to reduce the hazards of a freestanding candle.

Therefore, claims 1 and 24 and the claims dependent from claim 1 are allowable.

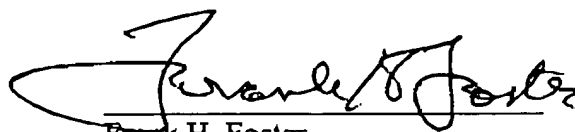
Applicant's claim 23 is directed to applicant's method illustrated in Figs. 21-25 and described in paragraphs [0061] and [0062]. According to that method, the lower end of the wick is impregnated with a flame resistant sealant and then bonded directly to the flame resistant sheet. "Impregnate" means "to cause to be filled, imbued, mixed, furnished or saturated" [Webster's Third New International Dictionary, 1981]. By filling or saturating the end of the wick with sealant, the sealant itself becomes the wick holder. This eliminates the need for a separate wick support like the metal wick support used in the other embodiments and shown in the prior art. Applicant's undersigned attorney finds nothing like that in any prior art. Henze does not disclose any sealant and does not show impregnating the end of the wick with anything. The Pappas reference does show sealant contacting or bonding to the wick and the wick holder, but it does nothing like impregnating the end of the wick with the sealant. Pappas does show a conventional metal wick support having sealant used to bond that wick support to the bottom of a candle container. But Pappas does not show the impregnating the lower end of the wick or using the impregnated end as the wick support itself, instead of the usual metal wick support (sustainer). Figs. 22 and 25 illustrate the use of the impregnated end of the wick as the wick support, eliminating the need for the metal wick support. Therefore, claim 23 is also allowable.

Therefore, reconsideration and allowance are respectfully requested.

The Commissioner is authorized to charge Deposit Account No. 13-3393 for any insufficient fees under 37 CFR §§ 1.16 or 1.17, or credit any overpayment of fees.

Respectfully submitted,

4/23/03  
Date of Signature



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Our File No.: LUM 180

Enclosures: Transmittal Form  
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Extension of Time Request - 2 month

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